

REMARKS

Upon entry of the claim amendments, Claims 1-5 will be all the claims pending in the application.

Amended Claim 1 is supported by the description at page 4, lines 20-24, and by reference to FIG. 1. New Claims 4-5 are supported by original Claims 2-3.

At page 2 of the Action, the Examiner indicates that the listing of references in the specification is not a proper Information Disclosure Statement (IDS). There are three prior art references identified at page 3 of the specification. FR-A- 2 095 661 is an equivalent of U.S. Patent No. 3,659,962 to Zink, *et al.*, which has been included in the Notice of References Cited, Form PTO-892, attached to the Action. European Patent Publication No. 99 828 has also been included therein. The third reference, U.S. Patent No. 2,403,431 to Dobrin, is being submitted herewith in an IDS.

Referring to the §112, second paragraph, rejection of Claims 1-3 at page 2 of the Action, Applicant respectfully submits that in view of the above amendments each of Claims 1-5 fully satisfies the requirements of §112.

Referring to the §102(b) rejection of Claims 1 and 2 as being anticipated by U.S. Patent No. 3,101,773 to Blaha ("the '773 Patent") and the §103(a) rejection of Claim 3 as being unpatentable over the '773 Patent in view of U.S. Patent No. 2,072,599 to Lemaitre ("the '599 Patent") at pages 4 and 5 of the Action, Applicant respectfully traverses.

The '773 Patent, and the '773 Patent in view of the '599 Patent, does not disclose or suggest the claimed device, wherein at least the ends of the tubes (6) have their axes appreciably parallel to a wall of mixing tube (5) of the venturi (2), wherein mixing tube (5) is a conical upper part (5) of the venturi (2).

In the presently claimed device, the recited "mixing tube" is the conical upper part (5) of the venturi. While the tubes (6) may have a part (8) parallel to the axis of the central supply (1) and parallel to the axis of a neck (4) of the venturi, an upper part (7) of the tubes is appreciably parallel to a wall of the conical upper part (5) of the venturi and not to the axis of the neck (4) of

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the venturi. The claimed device succeeds in maximizing the distribution of the gas speed across all the section.

Blaha, on the other hand, discloses a burner, wherein the ends of the plurality of tubes are arranged parallel to a wall 21 of the venturi. The wall 21 of Blaha's venturi, however, does not correspond to the presently claimed mixing tube (5), which is a conical upper part (5) of the venturi (2). The ends of Blaha's plurality of tubes do not have their axes appreciably parallel to the wall of a conical upper part of the venturi. Blaha's tubes 39 are parallel to the axis of the "throat section" 21 and do not have any end part diverging from this axis.

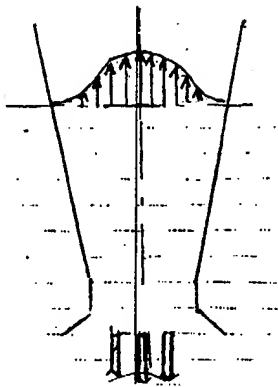
As indicated, the claimed device succeeds in maximizing the distribution of the gas speed across all the section. In particular, the claimed device comprises at least ends of tubes 6 injecting gas in the upper conical part (5) of the venturi (2) tangentially to a wall of the upper conical part (5), in order to prevent the gas and the air from whirling along this wall of the venturi, which would otherwise limit the amount of air driven by the gas. In addition, central supply (1) compensates for the fall in pressure that the air drawn at high speed by the gas along the upper conical part's wall would create along the axis of the venturi.

For the Examiner's convenience, the distribution of the gas speeds inside the upper conical part (5) is represented diagrammatically as follows, wherein Blaha's arrangement corresponds to diagram (1) and the claimed device corresponds to diagram (3):

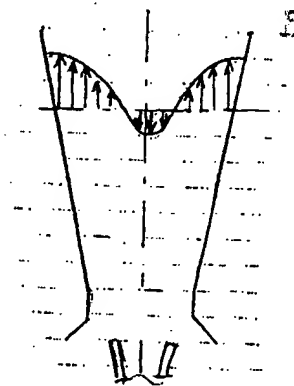
- (1) with only tubes parallel to the axis of the neck or throat of the venturi, wherein the arrows represent the gas speed inside the mixing tube (5), one can see that the greater speed is located along the axis of the venturi neck or throat, *i.e.*, in a relatively small section, which results in a small quantity of air being drawn;
- (2) with only tubes parallel to the upper conical part of the venturi, *i.e.*, without the claimed central supply (1), the gas speed is high along the wall of the upper conical part, but is negative in the central part thereof; and
- (3) with at least ends of tubes (6) parallel to a wall of the upper conical part of the venturi and a central supply (1), the speed of the gas varies very little along a

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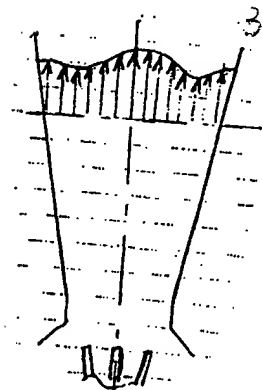
cross-section of the venturi and this distribution of speeds maximizes the quantity of air being drawn by the gas.



.../..



...2...



...3...

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Accordingly, Blaha does not disclose or suggest the claimed device.

Lemaitre fails to cure Blaha's deficiency. Lemaitre discloses a device comprising nozzles injecting steam 6 along the walls of the smoke stack of a locomotive to prevent a contact between these walls and the smoke. Lemaitre nowhere refers to a venturi, even though Lemaitre's Figure 1 happens to show a stack 5 with a profile looking eventually like a venturi. Lemaitre has nothing to do with the device of the present invention or Blaha's disclosure.

Reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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